NOTE

PSYCHOLOGY OF PLEAS: THE INFLUENCE OF COGNITIVE PROCESSING STYLE ON PLEA-BARGAIN DECISIONS

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Plea bargaining has become the primary method through which criminal cases are disposed in the American criminal justice system. In the haste of prosecutors, judges, and defense attorneys alike to take advantage of the speed and ease of disposition that plea bargaining offers, the interests of defendants themselves are too often swept under the rug. The plea-bargaining system fails to make any meaningful determination of whether a defendant in fact understands exactly what it means to accept a plea. This Note offers a cognition-based explanation of why defendants who are capable of technically rational decision-making may nonetheless be incompetent to make a plea decision, and argues that a defendant's cognitive processing style must be taken into account in determining whether a plea decision is in fact knowing and voluntary.

INTRODUCTION

Plea bargaining has become much more prevalent in the American justice system than the speedy and public trial promised by the Constitution.[1] In fact, the plea system has nearly completely eclipsed the trial system: in 2018, 97.4% of federal cases were resolved through a plea bargain rather than trial.[2] The plea system is designed to push defendants through a clogged criminal justice system as quickly as possible.[3] However, in its haste to process all those caught in its web, the system largely

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1 U.S. CONST. amend. VI.

2 Statistical Information Packet: D.C. Circuit, United States Sentencing Commission (2018), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/federal-sentencing-statistics/state-district-circuit/2018/dcc18.pdf. As Justice Kennedy observed, "criminal justice today is for the most part a system of pleas, not a system of trials." Lafler v. Cooper, 566 U.S. 156, 170 (2012).

3 Kaelyn Phelps, Comment, *Pleading Guilty to Innocence: How Faulty Field Tests Provide False Evidence of Guilt*, 24 ROGER WILLIAMS U. L. REV. 143, 144–45 (2019).

ignores the possibility that a defendant does not fully understand the meaning of a plea bargain and cannot competently process the significance of waiving numerous constitutional rights. Plea bargaining is still "an unregulated 'industry'" in which prosecutors have tremendous control and discretion in orchestrating pleas.[4] While pleas must be knowing, intelligent, and voluntary,[5] virtually no scholarship examines the factors that make a plea knowing, intelligent, or voluntary.[6] The plea system fails to account for many possible deficits in the ability of a defendant to evaluate a proposed plea deal, which could lead innocent defendants to plead guilty to crimes that they did not commit, casting doubt on current legal practices.[7]

The criminal justice system provides at least some protection for defendants choosing whether to enter into a plea agreement. *Brady v. United States*[8] establishes that a court may only accept pleas that it knows to be knowing, voluntary, and intelligent,[9] presenting a low hurdle for prosecutors to clear to ensure that a defendant enters into a constitutional plea deal.[10] Further, the competency standard of *Dusky v. United States*[11] establishes some safeguard against entering into unjust plea arrangements: in order to be competent to enter a guilty plea or to stand trial, a defendant must have a "sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding" and "a rational as well as factual understanding of the proceedings against him."[12] However, *Dusky*, like *Brady*, is a very low hurdle for courts to clear in determining that a defendant is competent to be adjudicated.[13] In most cases, as long as a defendant is consciously aware of the proceed-

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4 John H. Blume & Rebecca K. Helm, *The Unexonerated: Factually Innocent Defendants Who Plead Guilty*, 100 CORNELL L. REV. 157, 165 (2014) [hereinafter "*Unexonerated*"].

5 *See, e.g.*, Brady v. United States, 397 U.S. 742, 748 (1970) ("Waivers of constitutional rights not only must be voluntary but must be knowing, intelligent acts done with sufficient awareness of the relevant circumstances and likely consequences.").

6 Rebecca K. Helm & Valerie F. Reyna, *Logical but Incompetent Plea Decisions: A New Approach to Plea Bargaining Grounded in Cognitive Theory*, 23 PSYCHOL., PUB. POL'Y, & L. 367, 367 (2017).

7 *See* Lucian E. Dervan & Vanessa A. Edkins, *The Innocent Defendant's Dilemma: An Innovative Empirical Study of Plea Bargaining's Innocence Problem*, 103 J. CRIM. L. & CRIMINOLOGY 1, 48 (2013).

8 397 U.S. 742.

9 "Waivers of constitutional rights not only must be voluntary but must be knowing, intelligent acts done with sufficient awareness of the relevant circumstances and likely consequences." *Brady*, 397 U.S. at 748.

10 *See infra* Part II.

11 362 U.S. 402 (1960).

12 *Id.* at 402 (internal quotation marks removed). The *Dusky* standard applies to decisions to plead guilty as well as decisions to go to trial. Godinez v. Moran, 509 U.S. 389, 398–99 (1993).

13 *See, e.g.*, Godinez v. Moran, 509 U.S. 389 (1993) (holding that a rational understanding standard is sufficient for guilty pleas).

ings against him, he may be deemed competent to stand trial regardless of any deficits that might affect his understanding of those proceedings.[14] In order to preserve fairness within the justice system, prosecutors must account for all deficits that could render a defendant's plea agreement not fully knowing, voluntary, or intelligent, not simply deficits of defendants with severely compromised mental health.

Psychological theories of cognitive processing can shed light on some deficits in defendants' plea-bargain reasoning that might not be immediately apparent. Fuzzy-Trace Theory ("FTT"), a theory of memory and decision making that explains differences in cognitive processing,[15] suggests that, in fact, the general class of people who choose to commit crimes are one of the very classes of people who should receive special consideration under an updated plea competency standard. According to Fuzzy-Trace Theory, individuals process information in two ways: verbatim-based processing, which relies on specific details, and gist-based processing, which captures the larger, big-picture meaning of information.[16] People who rely on verbatim-based processing are more likely to take risks—for example, the risk of committing a crime—than people who rely on gist-based processing.[17] Verbatim thinkers rely on a precise trade-off of the risks and rewards involved in a decision.[18] Therefore, a verbatim thinker deciding whether to rob a bank will weigh the risk (a low probability of getting caught) against the reward (a high probability of getting a lot of money) and decide to commit the crime. This increased willingness to take risks occurs because a verbatim thinker will process the exact details of a decision ("Realistically, only one percent of bank robbers are caught, and I could get a lot of money!") rather than the decision's overall meaning and implications ("I shouldn't commit a crime, and I could get caught.").[19] In contrast, a gist thinker is more likely to cue bottom-line, big-picture values such as "I should not break the law" and decide not to commit the crime.[20]

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14 *See, e.g.*, Salas v. United States, 557 F. Supp. 2d 174, 177 (D. Mass. 2008) (holding that defendant was competent to plead guilty "in spite of his medications" because he "understood the consequences of his plea and . . . he was lucid and aware of the proceedings").

15 Valerie F. Reyna & Charles J. Brainerd, *Dual Processes in Decision Making and Developmental Neuroscience: A Fuzzy-Trace Model*, 31 DEVELOPMENTAL REV. 180, 186 (2011).

16 *See* Valerie F. Reyna, *A New Intuitionism: Meaning, Memory, and Development in Fuzzy-Trace Theory*, 7 JUDGMENT & DECISION MAKING 332, 333 (2012).

17 *See* Valerie F. Reyna, Steven M. Estrada, Jessica A. DeMarinis, Regina M. Meyers, Janine M. Stanisz, & Britain A. Mills, *Neurobiological and Memory Models of Risky Decision Making in Adolescents Versus Young Adults*, 37 J. EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY, & COGNITION 1125, 1128 (2011).

18 *See id.* at 1139.

19 *See id.* at 1126.

20 *See id.*

As a result of their cognitive processing style, verbatim-based processors who choose to commit crimes may also be unable to make a competent plea-bargain decision. Deciding whether to accept a plea deal involves conducting a cost-benefit analysis of taking a plea versus going to trial, but it also requires a defendant to consider his own values, such as belief in maintaining innocence or desire to avoid a felony conviction.[21] According to FTT, a verbatim thinker will consider only the precise numerical details of the cost-benefit analysis, which may result in a plea decision inconsistent with the defendant's underlying values and preferences.[22] If a defendant makes a plea decision counter to her underlying desires purely as a result of her cognitive processing style—essentially engaging in a form of self-sabotage simply because neither she nor her lawyer is aware that detrimental cognitive processing may be compelling her decision—it is difficult to rationalize the plea as knowing or intelligent in accordance with *Brady*.

This Note will proceed in the following way: In Part I, I will discuss the case law governing mental competency to enter into plea bargains. In Part II, I will discuss Fuzzy-Trace Theory and its application to the plea-bargaining context. In Part III, I will discuss the ways in which people who commit crimes may have reduced mental competency to enter into plea bargains, as evidence by their decisions to commit those crimes, and may also be considered to have reduced culpability. Lastly, in Part IV, I will discuss policy implications of recognizing plea incompetency and reduced culpability on the basis of cognitive processing style, and suggest system changes to increase fairness.

I. LEGAL STANDARDS FOR PLEA COMPETENCY

A defendant who chooses to accept a guilty plea "simultaneously waives several constitutional rights": his right against self-incrimination, "his right to trial by jury, and his right to confront his accusers."[23] As a result, the record must demonstrate that defendants enter into guilty pleas knowingly (or intelligently) and voluntarily. Any guilty plea not made knowingly and voluntarily is obtained in violation of due process.[24] Because pleas must be made knowingly and voluntarily, a plea can only be valid if defendants can demonstrate their full and complete understanding of the relinquishment of these rights.[25]

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21 *See* Helm & Reyna, *supra* note 6, at 368.

22 *Id.* at 370.

23 McCarthy v. United States, 394 U.S. 459, 466 (1969).

24 *See id.*; *see also, e.g.*, Santobello v. New York, 404 U.S. 257, 261–62 (1971); United States v. Masthers, 539 F.2d 721, 725–26 (D.C. Cir. 1976).

25 *McCarthy*, 394 U.S. at 466.

The Supreme Court's affinity for plea bargains, expressed in *Brady*, is rooted in a belief that guilty pleas are beneficial to prosecutors, defendants, and courts.[26] The obvious benefit for a defendant lies in the lighter sentence that she often receives as a result of accepting a plea.[27] The prosecution receives the benefit of an easy conviction, enormous discretion in choosing which cases to plead and which charges to offer,[28] and the relief of its burden to prove its case against a defendant beyond a reasonable doubt. And of course, the defense, prosecution, and court alike are spared the time, hassle, and general effort of slogging through a time-consuming trial.

Federal Rule of Criminal Procedure 11 provides some protection for defendants by requiring courts (at least in theory) to determine whether the defendant in fact understands the constitutional rights that he forfeits by accepting a guilty plea.[29] Judges must inform defendants of their right to plead not guilty and proceed to trial, the nature of the charges against them, and the possible minimum and maximum sentences.[30] In addition, courts must determine that a factual basis for the guilty plea exists[31]—in other words, the judge must be satisfied that the facts indicate a likelihood that the defendant is, in fact, guilty. Defendants may withdraw a plea prior to the court's acceptance of it, or prior to the imposition of sentence if the court rejects the plea under 11(c)(5);[32] or "the defendant can show a fair and just reason for requesting the withdrawal."[33]

However, the plea-bargaining system has not operated in the "benefits-for-all" spirit envisioned by the *Brady* Court.[34] Over time, the benefits and protections for defendants in this system have been gradually chipped away.[35] This erosion has occurred mainly through the Supreme Court's interpretation of the "knowing and voluntary" requirement.[36]

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26 Brady v. United States, 397 U.S. 742, 753 (1970) ("[W]e cannot hold that it is unconstitutional for the State to extend a benefit to a defendant who in turn extends a substantial benefit to the State and who demonstrates by his plea that he is ready and willing to admit his crime and to enter the correctional system in a frame of mind that affords hope for success of rehabilitation over a shorter period of time than might otherwise be necessary.").

27 *See id.* at 749.

28 *See* Lindsey Devers, Bureau of Justice Assistance, *Plea and Charge Bargaining* 2 (2011) ("The plea bargaining process has been criticized for allowing prosecutors too much discretion compared with judges, who are held to concise sentencing guidelines.").

29 FED. R. CRIM. P. 11(b).

30 FED. R. CRIM. P. 11(b)(1).

31 FED. R. CRIM. P. 11(b)(3).

32 FED. R. CRIM. P. 11(c)(5).

33 FED. R. CRIM. P. 11(d).

34 *See* Brady v. United States, 397 U.S. 742, 758 (1970).

35 *See* Robert Schehr & Chelsea French, *Mental Competency Law and Plea Bargaining: A Neurophenomenological Critique*, 79.3 ALA. L. REV. 1091, 1098–99 (2016).

36 *Id.*

A. "Knowingly" (or "Intelligently")

Brady required that plea bargains be made "knowingly" or "intelligently," using both terms to mean the same thing.[37] A plea is "knowing" if the defendant is "fully aware of the direct consequences" of the plea, as reflected by the record.[38] "Direct consequences" include the possible length of imprisonment or fine amount that a defendant could receive.[39] The record must indicate that the defendant knows and understands the constitutional rights that she will be forfeiting by accepting a plea, and that the defendant understands the nature of the charges against her.[40]

However, the Supreme Court has construed the "knowing" requirement very loosely, requiring defendants to have very little actual understanding of the plea, the crime to which they are pleading guilty, or the rights that they forfeit by accepting a plea.[41] For example, a plea may be considered knowing and intelligent as long as a defendant receives "real notice of the . . . charge[s] against him."[42] Defendants do not have to demonstrate that they actually comprehend the charges.[43] Further, even if a defendant does not understand the specific elements of an offense, a plea may still be considered knowing as long as the record affirms that a defendant's attorney explains the elements of the charge to the defendant.[44] Essentially, the ways that courts measure whether a plea is "knowing" in no way measure a defendant's actual understanding of the charge against her, her potential sentences, the risk of going to trial, and what exactly she gives up by accepting a plea.[45]

B. "Voluntary"

In addition to being knowing and intelligent, pleas must also be voluntary.[46] *Boykin v. Alabama*[47] set forth the standard for voluntariness:

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37 *Brady*, 397 U.S. at 755 (1970).

38 *Id.* (quoting the Fifth Circuit) (internal quotation marks removed).

39 *See* Gabriel J. Chin & Richard W. Holmes Jr., *Effective Assistance of Counsel and the Consequences of Guilty Pleas*, 87 CORNELL L. REV. 697, 699 (2002).

40 *See* FED. R. CRIM. P. 11(b)(1)(G); FED. R. CRIM. P. 11(g).

41 *See* Schehr & French, *supra* note 35, at 1098.

42 Bousley v. United States, 523 U.S. 614, 618 (1998) (internal quotation marks removed).

43 *See* Schehr & French, *supra* note 35, at 1098. For example, in *Brady*, the Court found that the defendant's plea was intelligent simply because the defendant had a competent lawyer, he was aware of the charges against him, and he was competent to stand trial. Brady v. United States, 397 U.S. 742, 756 (1970).

44 For example, in Bradshaw v. Stumpf, 545 U.S. 175 (2005), because the record demonstrated that the defendant's attorney had explained the elements of the charge to the defendant, the defendant's plea to aggravated murder was considered knowing even though the defendant claimed that he did not understand the specific intent requirement. *Id.* at 182–83.

45 *See* Schehr & French, *supra* note 35, at 1099.

46 Boykin v. Alabama, 395 U.S. 238, 242 (1969).

47 *Id.* at 238.

pleas may not be influenced by threats or coercion, and the plea must be an "intentional relinquishment of constitutional rights."[48] In securing a plea, prosecutors may not employ misrepresentations,[49] "actual or threatened physical harm," or "mental coercion overbearing the will of the defendant."[50]

Like knowledge, voluntariness has proven an incredibly low hurdle for prosecutors to jump over in securing guilty pleas. In order to establish a showing of voluntariness on the record in accordance with Federal Rule of Criminal Procedure 11(b)(2), the judge must simply have the defendant affirm that "the plea . . . did not result from force, threats, or promises (other than promises in [the] plea agreement)."[51] If there is no evidence that a defendant was threatened or coerced into accepting the plea, a guilty plea may be considered voluntary.[52] *Bordenkircher v. Hayes*[53] established a low standard for coercion—as long as a defendant is free to accept or reject a prosecution's offer, a prosecutor is generally free to overcharge a defendant in order to then offer a plea deal that the defendant will be unable to refuse.[54]

Moreover, the Supreme Court, along with lower federal courts, has established contradictory law regarding whether a plea must in fact be free from coercion. Despite the Court's rulings that a plea must be free from threats, the prosecutor is fully permitted to threaten a defendant with harsher punishment after trial; the Supreme Court has repeatedly acknowledged that pleas made under such threats satisfy the voluntariness requirement.[55] Prosecutors may also threaten to prosecute family members if a defendant does not take a guilty plea, and the defendant's acceptance of a plea under such a threat will also be considered voluntary.[56]

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48 Schehr & French, *supra* note 35, at 1099 (citing *Boykin*, 395 U.S. at 243 n. 5) (internal quotation omitted).

49 Miller v. Angliker, 848 F.2d 1312, 1320 (2d. Cir. 1988) (quoting Brady v. United States, 397 U.S. 742, 757 (1970)).

50 *Brady*, 397 U.S. at 750.

51 FED. R. CRIM. P. 11(b)(2).

52 *Brady*, 397 U.S. at 750.

53 434 U.S. 357 (1978).

54 *Id.* at 363.

55 *See, e.g.*, United States v. Forrest, 402 F.3d 678, 690–91 (6th Cir. 2005) (upholding a plea where a prosecutor threatened defendant with a federal indictment and higher charges for refusing to accept a state plea bargain); Hays v. United States, 397 F.3d 564, 569, 570 (7th Cir. 2005); United States v. Williams, 47 F.3d 658, 662 (4th Cir. 1995). For example, the Court has established that prosecutors may constitutionally force a plea by threatening to seek the death penalty at trial. *See Parker v. North Carolina*, 397 U.S. 790, 794–95 (1970). Further, in United States v. Farris, 388 F.3d 452 (4th Cir. 2004), the Fourth Circuit Court of Appeals found the defendant's plea to be voluntary even though the prosecutor threatened to deport the defendant to Guantanamo Bay if he were convicted at trial. *Id.* at 457.

56 *See, e.g.*, United States v. Spilmon, 454 F.3d 657, 658–59 (7th Cir. 2006); United States v. Hodge, 412 F.3d 479, 488, 489, 492 (3d Cir. 2005); United States v. DeFusco, 949

The Supreme Court put the crowning touch on the evisceration of the voluntariness requirement in *Corbitt v. New Jersey*.[57] In recognizing that a plea is knowing and voluntary if the defendant understood the charges and chose to enter the plea absent threats or coercion, the Court also held that offering a defendant a lenient plea sentence under threat of a harsh trial sentence did not amount to a penalty for exercising the constitutional right to trial.[58] The Court acknowledged that equal protection does not protect a defendant who simply made a "bad assessment of risks" in making a plea decision.[59]

In sum, previous court decisions have so eroded the knowing and voluntary protections for defendants entering into plea bargains that it is now all but constitutional to force a defendant into accepting a plea of which he has no functional understanding. As I will discuss in the coming sections, this utter lack of protection can have profound and dangerous implications for defendants who appear to understand a plea, but in actuality are unable to comprehend its consequences despite having logical reasoning—defendants who, to use the language of the *Corbitt* Court, cannot help but make a "bad assessment of risks."[60]

C. Mental Competency

Defendants who are found legally incompetent cannot be convicted and therefore cannot plead guilty.[61] The Supreme Court has established that the requirements for competency to stand trial, articulated in *Dusky v. United States*,[62] also apply to competency to accept a plea.[63] The *Dusky* standard establishes that a defendant is competent if he or she has a "sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding" and "a rational as well as factual understanding of the proceedings against him."[64] In *Godinez*, Justice Thomas articulated the difference between the competency standard and the knowing-and-voluntary requirement as follows:

> The focus of the competency inquiry is the defendant's mental capacity; the question is whether he has the *abil-*

F.2d 114, 119 (4th Cir. 1991); United States v. Marquez, 909 F.2d 738, 741, 742–43 (2d Cir. 1990); United States. v. Buckley, 847 F.2d 991, 1000 n.6 (1st Cir. 1988); United States v. Diaz, 733 F.2d 371, 373, 374–75 (5th Cir. 1984); United States v. Usher, 703 F.2d 956, 958 (6th Cir. 1983).

57 439 U.S. 212 (1978).

58 *Id.* at 226.

59 *Id.*

60 *Id.*

61 *See, e.g.*, Pate v. Robinson, 383 U.S. 375, 378 (1966) ("[T]he conviction of an accused person while he is legally incompetent violates due process.").

62 362 U.S. 402, 402 (1960).

63 Godinez v. Moran, 509 U.S. 389, 391 (1993).

64 *Dusky*, 362 U.S. at 402 (internal quotation marks removed).

> *ity* to understand the proceedings. The purpose of the "knowing and voluntary" inquiry, by contrast, is to determine whether the defendant actually *does* understand the significance and consequences of a particular decision.[65]

However, even when considered together, both of these standards are simply too easy to meet. The fact that a defendant has the ability to consult with his lawyer and understand the proceedings against him are not enough to establish that a defendant is capable of making a plea decision that aligns with his values. Further, as discussed previously, the "knowing and voluntary" requirement does not actually measure whether the defendant understands the consequences of a plea decision—only whether the court thinks that the decision has been sufficiently explained that the defendant *should* understand it.

II. FUZZY-TRACE THEORY

A. *General Tenets of Fuzzy-Trace Theory*

Psychological theories of decision-making can aid understanding of why the gulf between Justice Thomas' interpretation of the competency and "knowing and voluntary" standards and the way these standards actually function for defendants is far too large to result in fair outcomes. In particular, Fuzzy-Trace Theory (FTT), a dual-process theory of memory and decision making,[66] can shed light on the reasons that even people capable of engaging in logical reasoning may nonetheless be incompetent to make a plea decision.[67]

FTT posits that when people encode information (the process of perceiving and absorbing information so that it can be stored in memory for understanding and retrieval), they encode that information through two different types of processing: verbatim-based processing and gist-based processing.[68] Verbatim processing is the processing of surface-level details, such as specific words, numbers, or probabilities.[69] Gist processing is the processing of bottom-line, big-picture meaning—gist-based processors retrieve substantive information while ignoring exact, specific details.[70]

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65 Godinez v. Moran, 509 U.S. 389, 401 n.12 (1993) (citations removed).

66 Reyna & Brainerd, *supra* note 15, at 186.

67 Helm & Reyna, *supra* note 6, at 367 (explaining that a deeper understanding of cognition is required to understand why the plea-bargaining system does not always enable people with "understanding, reasoning, and appreciation in the traditional legal senses" to make competent plea decisions).

68 *Id.* at 368.

69 Reyna, *supra* note 16, at 333.

70 *Id.*

Verbatim-based processing is associated with unhealthy risk taking because reliance on precise, fine-grained details encourages risk-taking when the numerical risk is small but the benefits are large.[71] For example, a low probability of infection with the human papillomavirus (HPV), in consideration of high perceived benefits from sexual activity, would lead a person who processes information in a verbatim-based manner to engage in unprotected sex.[72] In contrast, a person relying on gist-based processing will rely less on specific details and more on big-picture meaning. As a result, a person relying on gist would simply characterize unprotected sex as risky, and therefore choose not to take that risk regardless of the specific numerical chances of contracting infection from a particular partner.[73] If a person encodes a risky behavior in terms of the overall, bottom-line meaning of the behavior rather than in terms of the actual trade-off of risk and reward, they are less likely to make risky decisions.[74] When a person can justify taking a risk because the reward is greater than the risk of a negative outcome, relying on gist-based processing can protect the person from taking the risk because the person will reason that *any* amount of risk is too dangerous.[75]

Further, verbatim-based decision making does not reflect a person's true underlying values.[76] Specifically, FTT posits that values such as moral principles "are represented in long-term memory as vague gists."[77] People relying on gist-based processing are more likely to cue their gist-based values because the representations of those values will appear very similar to the representation of options in gist-based decision-making[78]—both are broad and meaning-based rather than precise and situation-specific.[79] In contrast, verbatim-based representations fade more quickly over time than long-term gist representations (for example, people might not remember the exact numerical chance that they will con-

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71 Reyna et al., *supra* note 17, at 1128.

72 *See, e.g.*, Mary B. Adam & Valerie F. Reyna, *Coherence and Correspondence Criteria for Rationality: Experts' Estimation of Risks of Sexually Transmitted Infections*, 18 J. BEHAV. DECISION MAKING 169, 173 (2005).

73 *See* Valerie F. Reyna & Britain A. Mills, *Theoretically Motivated Interventions for Reducing Sexual Risk Taking in Adolescence: A Randomized Controlled Experiment Applying Fuzzy-Trace Theory*, 143 J. EXPERIMENTAL PSYCHOL. 1627, 1628 (2014).

74 *Id.*

75 *See* Helm & Reyna, *supra* note 6, at 368.

76 *Id.* at 370 (explaining that verbatim-based processing entails a "trading off of risk and reward" that "is less likely to take account of more fuzzy, qualitative considerations, even when they may be important"). In other words, people relying on verbatim-based processing are less likely to consider broad concepts—like values—when making decisions.

77 *Id.* at 369.

78 *Id.*

79 *See* Jun Fukukura, Melissa J. Ferguson, & Kentaro Fujita, *Psychological Distance Can Improve Decision Making Under Information Overload Via Gist Memory*, 142 J. EXPERIMENTAL PSYCHOL. 658, 659 (2013).

tract HPV from unprotected sex, as compared to remembering that unprotected sex is risky),[80] and are specific to individual decisions.[81] A person relying on verbatim-based processing would not necessarily cue these gist-based values when making decisions, and their decisions are unlikely to reflect those values.[82]

According to FTT, certain groups tend to rely more on verbatim-based processing, rendering them more vulnerable to unhealthy risk-taking.[83] Specifically, adolescents and people with some autistic traits rely more on verbatim-based processing than the average adult.[84] In addition, unhealthy risk-taking is likely indicative of reliance on verbatim-based processing.[85] Therefore, it can be inferred that adults who are prone to risk-taking rely more heavily on verbatim-based processing than the average adult.

B. Fuzzy-Trace Theory in the Plea-Bargaining Context

Prior research incorporating FTT and plea-bargaining suggests that people who rely on verbatim-based processing make plea decisions differently than those who rely on gist-based processing.[86] Specifically, people relying on verbatim-based processing are less likely to take into account qualitative, categorical distinctions.[87] While quantitative factors, such as the length of the sentence or the probability of conviction at trial, may be the factors more typically associated with plea bargaining, quali-

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80 *See* Valerie F. Reyna & Barbara Kiernan, *Development of Gist Versus Verbatim Memory in Sentence Recognition: Effects of Lexical Familiarity, Semantic Content, Encoding Instructions, and Retention Interval*, 30 DEVELOPMENTAL PSYCHOL. 178, 189 (1994).

81 Rebecca K. Helm, Valerie F. Reyna, Allison A. Franz, & Rachel Z. Novick, *Too Young to Plead? Risk, Rationality, and Plea Bargaining's Innocence Problem in Adolescents*, 24 PSYCHOL. PUB. POL'Y. & L. 180, 182 (2017).

82 For an example, consider a scenario involving a person deciding whether to get in a car with a drunk driver. A person relying on gist-based processing will likely retrieve the value of "I want to avoid risk of injury or death." He or she will similarly view getting in the car with a drunk driver as carrying a high risk of serious injury or death, thereby cuing that value, and consequently choose to walk home or ride with someone else. In contrast, a person relying on verbatim-based processing would view the same situation differently. He or she will rely on a specific, verbatim representation, such as "I should not get in a car with a person with a BAC of 0.081" or "I should not get in a car with a person who has had more than four drinks in the past hour." This representation does not apply to someone with a BAC of 0.0799 or a person who has had three drinks in the past hour. Consequently, a person relying on this verbatim representation may choose to get in a car with someone who has had only three drinks in the past hour, even if they appear visibly intoxicated—their verbatim representation does not match the situation exactly, and they therefore do not cue the representation.

83 Reyna & Brainerd, *supra* note 15, at 201 (noting that individuals with autism, who tend to "focus on parts rather than global aspects of objects" and "have difficulty integrating information into a meaningful whole," are more likely to rely on verbatim-based processing).

84 *Id.* at 194–95.

85 Reyna et al., *supra* note 17, at 1128.

86 *See, e.g.*, Helm & Reyna, *supra* note 6, at 368.

87 *See id.* at 370.

tative factors, such as the difference between a felony and misdemeanor, jail time and probation, and being factually guilty or innocent, may be even more important considerations in the decision of whether to take a plea.[88]

Reliance on verbatim-based processing can influence defendants to make plea decisions that are not in their best interests in a number of ways. First, as previously discussed, reliance on verbatim-based processing can lead defendants to make plea decisions that do not align with their underlying values—decisions that they do not "truly" want to make and indeed would not make if they were relying on gist-based processing.[89] Defendants who rely on verbatim-based processing are less likely to access their values when making a decision, and therefore more likely to make such a contradictory decision.[90] The plea-bargaining decisions of adolescents serve as an example of the ways in which reliance on verbatim processing leads defendants to make plea decisions that do not align with their true values.[91] Adolescents are more likely than adults to rely on verbatim-based processing;[92] therefore, adolescents are more likely to be influenced by numerical, superficial details—for example, the difference in sentence length between going to trial versus taking a plea.[93] Analyses of adolescents' plea decisions confirm FTT's predictions: adolescents hold the same gist-based values that adults hold with regard to plea bargains, but their decisions do not reflect these values.[94] For example, prior research indicated that adolescents valued the principle of "I would not plead guilty to a crime I did not commit" even more highly than adults did; nevertheless, when asked to imagine that they were accused of a crime that they did not commit, adolescents pleaded guilty significantly more often than adults.[95] As predicted by FTT, groups who are predisposed to rely more on verbatim-based processing

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88 *See id.* at 368.

89 *See id.*

90 *See* Kentaro Fujita & H. Anna Han, *Moving Beyond Deliberative Control of Impulses: The Effect of Construal Levels on Evaluative Associations in Self-Control Conflicts*, 20 PSYCHOL. SCI. 799, 799 (2009) ("Despite having a remarkable capacity for logical reasoning, people frequently make decisions that undermine their valued goals.").

91 Helm & Reyna, *supra* note 6, at 368.

92 *See, e.g.*, Valerie F. Reyna, Evan A. Wilhelms, Michael J. McCormick, & Rebecca B. Weldon, *Development of Risky Decision Making: Fuzzy-Trace Theory and Neurobiological Perspectives*, 9 CHILD DEV. PERSP. 122, 122–23 (2015).

93 *See* Helm, Reyna, Franz, & Novick, *supra* note 81, at 184–85.

94 *Id.* at 189 (explaining that even adolescents who highly valued maintaining their innocence of a crime that they did not commit did not alter their decision-making based on whether they were innocent or guilty, "because the mental representations that they use to process plea decisions do not cue their values, and, hence, they fail to retrieve and apply appropriate values during their plea decision making").

95 *Id.*

are less capable of making plea decisions that align with their values.[96] Therefore, because these groups are making plea decisions contrary to their values without realizing that their true values would lead them to decide differently, their plea decisions cannot fit the legal standard of "knowing and voluntary."

Second, reliance on verbatim-based processing can lead defendants to make plea decisions that appear quantitatively favorable, but qualitatively are not in their best interests. Consider the following example: a defendant must choose whether to plead guilty to a misdemeanor conviction and receive a sentence of one year of probation, or to go to trial, where he or she faces an 80% chance of a felony conviction with one year of probation.[97] If the defendant is relying on verbatim-based processing, she will simply calculate the expected value of each option and pick the more favorable value, ignoring the distinction between a felony and a misdemeanor.[98] Here, a verbatim-based analysis will lead to a preference for trial because a defendant using verbatim-based processing will prefer an 80% chance of a one-year sentence to a 100% chance of a one-year sentence.[99] However, a defendant relying on gist-based processing will take into account the qualitative distinction between a misdemeanor and a felony and consider the ways in which a felony conviction will have a greater impact on the defendant's life than a misdemeanor conviction.[100] Therefore, a gist-based analysis in this scenario promotes accepting the plea and avoiding the risk of a felony conviction.[101] The combination of these two factors—neglect of meaning-based distinctions and inability to cue relevant factors—mean that defendants who rely on verbatim-based processing are more likely than those who rely on gist-based processing to make plea decisions that are not ulti-

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96 *Id.* at 182.

97 *Id.* at 181–82.

98 *Id.* This pattern of decision-making should lead to cause for concern because it indicates that defendants relying on verbatim-based processing, when making plea decisions, utterly fail to consider the profoundly more severe impact of a felony conviction. For example, people with felony convictions lose their rights to vote and carry firearms, may be required to register as sex offenders, and may lose eligibility for various types of public assistance and housing. In addition, they are required to carry the unquantifiable stigma of having been convicted of a felony throughout their lives, which impacts their ability to obtain employment, education, or housing even in places from which people with felony convictions are not disqualified. While a misdemeanor conviction is not without collateral consequences (for example, people convicted of certain misdemeanor sex offenses may be required to register as an offender, and people convicted of misdemeanor domestic violence offenses may not carry firearms), a felony conviction carries greater stigma and surer consequences.

99 *Id.*

100 *Id.*

101 *Id.*

mately in their best interests and fail to meet the knowing and voluntary standard.[102]

III. FTT AND COGNITIVE PROCESSING IN PEOPLE WHO COMMIT CRIMES

These considerations likely have profound implications for people who actually commit crimes. While prior research has explored the influence of gist- or verbatim-based processing on plea decisions in non-criminal populations, this influence in people who actually choose to commit crimes is as of yet unexplored. According to FTT, people who choose to commit crimes are one of the groups of people who may rely on verbatim-based processing, and therefore lack the capacity to competently plead despite having logic, like adolescents and people with autism spectrum disorder, who tend to "focus on parts rather than global aspects of objects."[103]

FTT establishes that unhealthy risk-taking is strongly associated with verbatim-based processing.[104] Therefore, it can be inferred that people who choose to take the risk of committing a crime are relying on verbatim-based processing. The ways in which reliance on verbatim-based processing can result in decisions to commit crimes can best be illustrated through an example: Imagine a man, in possession of the moral, intellectual, and cognitive faculties of an average adult, who is trying to decide whether to rob a bank. He has a gun and a ski mask, and he knows that he can walk into the bank, threaten the teller with his gun, and leave with a lot of money. Imagine that he also can be certain that there is a very low chance that he will be caught by police—perhaps a 1% chance that he will be caught, and a 99% chance that he will get away with the crime. He recognizes that robbing the bank constitutes breaking the law and that breaking the law is wrong. If he is relying on gist-based processing, he will view the trade-off of risk and reward in terms of bottom-line meaning: "There is a chance that I will be caught, and I do not want to risk prison time." In addition, if he relies on gist, he will likely cue his underlying value in regard to lawbreaking: "I should not break the law because lawbreaking is wrong." Both his cost-benefit analysis and his underlying values counsel in favor of choosing not to rob the bank.

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102 *See id.*

103 Reyna & Brainerd, *supra* note 15, at 201.

104 *See, e.g.*, Helm & Reyna, *supra* note 6, at 368–69. As previously discussed, individuals who consider a decision strictly in numerical (verbatim) terms will fail to consider the "bottom-line" fact that certain behavior, such as unprotected sex, is too risky to engage in, regardless of the reward.

However, if he relies on verbatim-based processing, he will not cue the underlying value of "I should not break the law;" rather, he will simply engage in a cost-benefit analysis of the probabilities of getting caught versus getting away with a lot of money. He will reason that a 1% chance of getting caught is a very low chance of realizing a negative outcome, compared with a 99% chance of getting away with a lot of money—a "low risk, high reward" situation. Therefore, a person relying on verbatim-based processing is more likely to choose to rob the bank.

Now, to illustrate the difficulties that such a defendant would experience in making a plea decision, imagine that the same man, relying on verbatim-based processing, decided to rob the bank, got caught, and now has the opportunity to enter into a plea bargain. Imagine that one of the defendant's underlying values is "avoid prison time at all costs"—his true preference in a plea bargain situation would be to take the option that gives him a chance to avoid prison time, no matter the consequences or the likelihood of actually escaping time behind bars. However, the prosecutor makes a compelling plea offer: the defendant can take a plea deal to spend five years in prison, or he can go to trial and risk a sentence of twenty years in prison. After consulting with his lawyer, the defendant determines that he has a seventy-five percent chance of being convicted at trial.

If the defendant were relying on gist-based processing, he would have no need to even consider the numbers at play in the decision—he would cue his underlying value, "I want to avoid prison time at all costs," and choose to go to trial because he has some chance of avoiding prison time at trial, as opposed to no chance of avoiding it with the plea bargain. Further, as previously discussed, people relying on gist-based processing tend to rely on qualitative, categorical distinctions between options. In the example here, the difference between "prison time for sure" and "a chance of no prison time" would be a qualitative, categorical difference, and the defendant would therefore be more likely to rely on this distinction in choosing to go to trial. Regardless of whether such a choice would be a wise one, the decision to go to trial would reflect the defendant's actual underlying preferences.

However, because the defendant here is relying on verbatim-based processing, the fact that he values avoiding prison time would never cross his mind. Instead, he would rely exclusively on a numerical cost-benefit analysis of the difference between the expected values of the two options. He will rely heavily on the quantitative, rather than qualitative, aspects of the plea decision—specifically, the length of each potential sentence and the probability of conviction at trial.[105] He would reason

[105] *See id.* at 378.

that a 100% chance of five years in prison (5 x 100% = 5 years) is a more favorable expected value than a 75% chance of twenty years in prison (20 x 75% = 15 years). As a result, because he focuses on the numerical aspects of the decision and fails to cue his underlying values, he will accept the plea bargain without considering the fact that he would truly prefer to go to trial and take the chance of avoiding prison.

The resulting decision in this scenario, while it might technically satisfy the legal standards for a plea bargain, can hardly be said to be "knowing and voluntary." As previously discussed, the "knowing and voluntary" standard establishes that a defendant must be aware of the direct consequences of accepting the plea[106]—the most basic of which, in this case, is that the defendant will serve prison time if he accepts the plea. The plea of a defendant relying on verbatim-based processing cannot satisfy the knowing and voluntary standard: the defendant is not actually aware of the qualitative aspects of the plea when he makes his plea decision, and as a result, he is not aware of some of the direct consequences of accepting a plea.

It is easy to say that, as long as the defendant has been informed of the terms of the plea, he is "aware" that accepting the plea will result in prison time. However, a defendant relying on verbatim-based processing is not actually aware of qualitative consequences of accepting a plea at the time at which the defendant makes his plea decision. In the example above, the defendant considers only the length of each potential sentence and the probability of conviction at trial. The defendant fails to take the actual factor of prison time (as articulated above, "prison time for sure" compared with "a chance at no prison time") into account in any way whatsoever in making his decision. Given that the qualitative aspects of the plea deal, such as the chance for prison time, do not enter into the defendant's consciousness at the time that he actually makes his plea decision, it cannot be said that he is aware of the direct consequences of the plea.

While defendants relying on verbatim-based processing are aware of at least one direct consequence of accepting a plea—the length of the sentence they face if they take the plea versus going to trial—awareness of one direct consequence should not be considered enough to establish that a plea is knowing. If the defendant is not actively aware of the qualitative aspects of the plea, which include direct consequences such as the certainty of prison time, at the time at which he makes his plea decision, he is not aware of all the direct consequences of the plea and the plea cannot be considered knowing and voluntary.

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106 Brady v. United States, 397 U.S. 742, 755 (1970).

Of course, an application of FTT to people who commit crimes requires an important caveat: FTT is a theory of *decision-making*, and the influences of verbatim-based and gist-based processing will be seen only when a person is making a *choice*. Therefore, the theory that people who commit crimes are more likely to be relying on verbatim-based processing may only apply to people who actively *choose* to commit a crime—a person who, when given a choice between committing a crime and gaining something or not committing a crime and gaining nothing, chooses to commit a crime. Such a theory assumes that the criminal is free to choose as he or she sees fit, and that neither duress nor necessity influences the criminal's decision.

However, further study of the reasons people commit crimes clearly needs to take into consideration factors other than personal choice. The average defendant faced with a plea deal likely did not simply stand in front of a bank and think, "I can rob this bank and get a lot of money, or I can head home and go to bed early for work tomorrow." Innumerable societal factors are usually at play in any individual's decision to commit a crime that make such a decision bigger than a simple trade-off of risk and reward—for example, a homeless adolescent joins a gang and commits an assault on a rival gang member because he has been threatened with death if he fails to do so, or an unemployed mother steals food from a store to feed her starving baby. And, of course, digging deeper, we know that either of these two sample situations may have arisen as a result of persistent societal patterns of discrimination and disadvantage. Therefore, a full and complete analysis of the reasons people commit crimes requires further research into this multitude of societal and personal factors and the way they interact to produce crime. However, Fuzzy-Trace Theory serves as a window into the ways in which a few of those factors—specifically, cognitive processing style, which in turn informs decision making and attitudes toward risky behavior—may make one person more likely to choose to commit a crime than another.

IV. POLICY RECOMMENDATIONS

If, as I have argued, people who choose to commit crimes engage with information through verbatim processing rather than gist processing, prosecutors and defense attorneys alike must consider how best to convey plea offers to discourage reliance on surface-level, verbatim details of plea agreements. In conveying plea offers to defendants, both prosecutors and defense attorneys should emphasize qualitative differences between the plea and trial over quantitative differences, such as emphasizing that a plea will result in a misdemeanor conviction and a trial in a felony conviction. In addition, in order to encourage reliance on underlying values, defense attorneys should discuss a defendant's feel-

ings and values regarding plea bargaining *before* they inform the defendant of the content of any plea offers.

Another possible way to induce people relying on verbatim-based processing to make decisions that more closely align with their actual values could be to reduce overcharging. Prosecutors have largely unlimited discretion to overcharge defendants with crimes that carry threats of lengthy sentences if convicted at trial in order to facilitate acceptance of what then seems like a very lenient plea offer.[107] Prosecutors' opportunities to offer coercive plea deals can prove dangerous and unfair to defendants, especially those who are not employing the same reasoning skills as an average adult. Defendants employing verbatim-based processing, who rely largely on the difference between the lengths of sentences with a plea or at trial, would be very susceptible to a threat of a long sentence at trial, compared with a short sentence if they accept a plea, and would be vulnerable to accepting an unfavorable plea offer that they do not truly want to accept.

In addition, while innocent defendants are not the focus of this paper, prior research indicates that innocent defendants are more likely to plead guilty to something they did not do if they are relying on verbatim-based processing, even if maintaining their innocence is very important to them.[108] Reducing overcharging—and thereby the extent to which the defendant relies on extreme numerical differences between sentences—could ensure that fewer innocent defendants accept coercive plea bargains, especially for defendants who strongly wish to maintain their innocence.

Further, this processing difference should be taken into account not only with regard to plea bargains, but also in evaluating culpability and in sentencing. According to FTT, people who rely on verbatim-based

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107 *See, e.g.*, Bordenkircher v. Hayes, 434 U.S. 357, 358–59, 364–65 (1978) (holding that indicting defendant as a habitual criminal, which carried a potential punishment of life imprisonment, because defendant refused to plead guilty to a charge of uttering a forged instrument did not violate due process even though the defendant's actual crime consisted of forging a check for $88.30). *See also Unexonerated*, *supra* note 4, at 161, 177, 178–79. Blume and Helm cite the cases of the West Memphis Three, Sterling Spann, and Edward Lee Elmore to illustrate the coerciveness of the prosecutors' discretion in offering pleas. In the case of the West Memphis Three, the judge upheld a plea deal in which the prosecutors, in light of new evidence that weakened their case against the defendants, offered a plea to time served, but only if all three defendants took the plea. *Id.* at 160. Faced with a choice of time served or the possibility of the death penalty, all three defendants took the plea. *Id.* Sterling Spann, having spent twenty years on death row before exonerating evidence came to light, chose to enter an *Alford* plea and become immediately eligible for parole rather than face another capital trial. *Id.* at 177. Edward Lee Elmore, in a similar situation, made the same decision. *Id.* at 178–79. In essence, prosecutors are fully permitted to coerce defendants into accepting plea offers under threats of a far more serious sentence at trial.

108 *See* Helm & Reyna, *supra* note 6, at 376.

processing constitute a minority of adults,[109] and do not reason in the same way as the average adult when making decisions. Because verbatim-based processors rely mainly on a numerical cost-benefit analysis to make a decision, they ignore bottom-line meaning, and as a result, they are less able to make well-reasoned decisions, despite their capacity for logical reasoning.[110] A person relying on verbatim-based processing does not fully consider all aspects of options, and therefore may be considered less culpable than a person who is not relying strictly on the numerical aspects of a decision. In addition, evidence of cognitive processing style could be particularly relevant as mitigation evidence in capital punishment sentencing. The death penalty is designed to be reserved for the "worst of the worst,"[111] and if the defendant, unlike most adults, made a badly-reasoned decision because he could not access all the necessary information for that decision as a result of his cognitive processing style, he should not be considered as among the "worst of the worst."

CONCLUSION

According to Fuzzy-Trace Theory, people who commit crimes—and therefore people who face plea decisions—are more likely than an average adult to rely on verbatim-based processing, rather than gist-based processing. Reliance on verbatim-based processing induces defendants to consider only the verbatim, surface-level details involved in making a decision, neglecting to consider either the bottom-line meaning of options or their own underlying values. As a result, people who rely on verbatim-based processing are not only more likely to choose to commit crimes, but are less able to enter into a knowing and voluntary plea bargain if they are arrested.

Prosecutors and defense attorneys alike must take into account the high likelihood that defendants have a different processing style in conveying plea offers. Given that prosecutors are already granted wide latitude to set the terms of a plea, this discretion can be even more dangerous and create an even higher probability of an unfair outcome if a defendant is relying heavily on the quantitative, numerical aspects of a plea. In order for the plea-bargaining system to be a fair one, its actors must ensure that defendants have an *actual* understanding of their plea

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109 *See* Helm, Reyna, Franz, & Novick, *supra* note 81, at 182.

110 *See* Helm & Reyna, *supra* note 6, at 377–78.

111 Kansas v. Marsh, 548 U.S. 163, 206 (2006) (Souter, J., dissenting) (internal quotation marks removed) (citing Roper v. Simmons, 543 U.S. 551, 568 ("Capital punishment must be limited to those offenders who commit a narrow category of the most serious crimes and whose extreme culpability makes them the most deserving of execution") (internal quotations omitted).

decisions, rather than just the surface-level understanding that *Brady*[112] and *Boykin*[113] require.

[112] Brady v. United States, 397 U.S. 742 (1970).
[113] Boykin v. Alabama, 395 U.S. 238 (1969).